



**U.S. Army Research Institute
for the Behavioral and Social Sciences**

Research Report 1771

**Commanders' Survey: Armor Captains'
Career Course (Distance Learning)**

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**U.S. Army Research Institute
for the Behavioral and Social Sciences**

A Directorate of the U.S. Total Army Personnel Command

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Training Technology**

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FOREWORD

The Future Battlefield Conditions (FBC) Team of the Armored Forces Research Unit (AFRU), U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) has a work package (211) FUTURETRAIN: Techniques and Tools for C4ISR Training of Future Brigade Combat Team Commanders and Staffs. Recent work under this work package has involved research and development concerning training for digital staffs.

The U.S. Army Armor School (USAARMS) has recently introduced a revised Armor Captains' Career Course (AC3) delivered primarily through Distance Learning (DL). In June 2000, the Director of the USAARMS requested that the AFRU provide Technical Advisory Service in the development and evaluation of a survey of both students and leaders involved with AC3 DL. This request was supported by an existing Memorandum from USAARMS requesting technical assistance entitled "Technical Assistance in Support of Armor Captains' Career Course Distance Learning," dated 24 June 1999.

This report describes the results of the survey developed to gather information regarding factors limiting participation in the AC3 DL course to include Reserve Component (RC) policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition. This report examines both course content and RC policies impacting distance learning time requirements and computer equipment support. The survey instrument was distributed by the USAARMS to the full population of AC3 DL students and their unit leaders. Responses were compiled and analyzed, and are presented in this research report.

The information provided in this report is valuable to the USAARMS and other organizations involved in training soldiers and leaders through distance learning methods. It provides feedback on RC personnel and training policies that can impact successful AC3 DL course completion. Updates were provided to Armor School representatives and results were briefed to the Director of the USAARMS, and Director of Training, National Guard Bureau in December 2000.



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COMMANDERS' SURVEY: ARMOR CAPTAINS' CAREER COURSE (DISTANCE LEARNING)

EXECUTIVE SUMMARY

Research Requirement:

The Director of the Armor School requested the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI), Armored Forces Research Unit (AFRU) at Fort Knox provide assessment support to the U.S. Army Armor School's (USAARMS) review of the Armor Captains' Career Course Distance Learning (AC3 DL). The assessment targeted factors limiting student participation in the course to include Reserve Component (RC) policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition. The information gathered will be used to guide further course development and to identify RC policies that support successful course completion.

Procedure:

ARI worked with USAARMS training developers and instructors to develop a survey of both students and unit leaders involved with AC3 DL. The USAARMS distributed the survey instrument by email to a total of 352 AC3 DL students and unit leaders involved with the course. The survey requested demographic information, and presented 14 open-response items. Responses were compiled and analyzed by ARI, and are presented in this research report.

Findings:

Respondents provided recommendations placed in the context of current RC policies as well as realistic constraints. Policy changes were identified that might support the students' successful course completion. Both students and unit leaders responses were generally positive regarding the course, and described it as an improvement over the previous paper-based correspondence course. Concerns about the length of specific portions of the AC3 DL course were identified which can be used in restructuring specific sections of the training. Both students and unit leaders contributed useful feedback and identified change recommendations based on their differing perspectives. As an example, students identified conflicts between unit drill and AC3 DL course time requirements, while unit leaders identified ways in which command emphasis on AC3 DL training could enhance successful completion of the course.

Utilization of Findings:

This report examines both course content and RC policies impacting distance learning course requirements and computer equipment support. It provides feedback on RC personnel and training policies that can impact successful AC3 DL course completion. This report can provide training developers and Army leaders with a better understanding of the current needs of the AC3 DL training program, and might provide course design insights generalizable to a broad

range of DL training programs. Findings suggest policy decisions that would promote training program success.

COMMANDERS' SURVEY: ARMOR CAPTAINS' CAREER COURSE DISTANCE LEARNING

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COMMANDERS' SURVEY: ARMOR CAPTAINS' CAREER COURSE (DISTANCE LEARNING)

Introduction

Curriculum Background

The U.S. Army Armor School (USAARMS) has redesigned the Armor Captains' Career Course (AC3), formerly known as the Armor Officers' Advanced Course (AOAC) for Reserve Components (RC) using the Total Army Training System Conversion (ATTRS) process. The course previously consisted of 24 paper-based modules with multiple choice knowledge tests taken by correspondence, followed by a two-week resident Active Duty Training (ADT) period at Fort Knox. The focus of the course was strictly on company team operations.

The redesign of AOAC(RC) has resulted in an expanded course delivered largely through Distance Learning (DL). The redesigned AC3 DL consists of three major phases: Phase I providing 240 hours of asynchronous (with an instructor "in the loop") Internet lessons delivered over a one-year period; Phase II providing 120 hours of synchronous lessons using videoteletraining, a virtual tactical operations center (VTOC), and a small group instructor during 10 consecutive Inactive Duty Training (IDT) weekends (60 hours of additional asynchronous training are included in this phase); and Phase III providing 120 hours of resident training during an ADT period at Fort Knox. The expanded AC3 DL is modeled after the Active Component (AC) AC3 and trains officers to be company commanders (Co CDRs) and to perform as assistant operations officers at battalion and brigade levels. The AC3 DL represents a prototype of future Army training.

Evaluation Background

In June 1999, the Director of the USAARMS requested that the U.S. Army Research Institute for the Behavioral and Social Sciences' Armored Forces Research Unit (ARI AFRU) at Fort Knox provide Technical Advisory Service to assist in assessment of the pilot AC3 DL. The request referred specifically to an assessment of Phase I. In response the ARI AFRU formed an ad hoc team of three personnel to work part-time with Armor School personnel on AC3 DL assessment. The initial or pilot delivery of the course was completed in November 2000.

In June 2000, the Director of the USAARMS further requested that ARI AFRU provide Technical Advisory Service to assist in an assessment of the AC3 DL course. This request specifically called for gathering feedback on the AC3 DL from both students actively involved in the course, and also the leaders of the units involved. The School desired expanded feedback regarding factors limiting student participation in the course to include RC policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition. The present report presents the feedback gathered and findings derived from this survey of AC3 DL students and their unit leaders.

Method

The ARI researchers worked with USAARMS training developers and instructors to develop the survey instrument. The survey was mailed electronically by the USAARMS to a total of 352 AC3 DL students and unit leaders involved with the course. The survey requested demographic information, and presented 14 open-response items. Demographic questions were selected for inclusion to allow comparisons to the other course evaluations. Where possible, questions were worded in the same format as those to be presented to the initial AC3 DL two-week resident class as part of the AC3 DL Phase I evaluation. Specific questions were selected to gather feedback on factors limiting student participation in the course to include RC policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition.

Instrument

Survey of Policies and Practices Supporting the Armor Captain's Career Course - Distance Learning (AC3 DL) is provided at Appendix B. The survey includes a cover sheet explaining the goals of the survey and a brief description of the course and key terms. The first section of the survey records demographic information from the respondent. The second section of the survey consists of 14 open-response format questions investigating factors limiting student participation in the course, to include RC policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition.

Survey Administration

Of the 352 surveys mailed out electronically, 304 reached the intended students and unit leaders (48 addresses had changed resulting in undelivered surveys). Data collection was conducted from October through November 2000. Of the 208 surveys reaching students, 33 (15.9%) were completed and returned. Of the 96 surveys reaching unit leaders, 31 (32.2%) were completed and returned.

Results

Respondent Demographics

The survey population was almost evenly split between RC students enrolled in the AC3 DL course, and RC unit leaders (includes Readiness Training Detachment [RTD]). Table 1 provides a description of the survey population in terms of their duty position, rank, and familiarity with the asynchronous, and synchronous portion of the AC3 DL course. The survey response rate is low and limits our ability to generalize opinions expressed in the survey to the total population of AC3 DL students and leaders. While it is risky to generalize the opinions expressed, the number of respondents might be adequate for purposes of identifying usability problems associated with the courseware, and for generating "good ideas" and policy change recommendations.

Table 1
Survey Population Demographics

<u>Duty Position</u>	Students		Leaders	
	N	%	N	%
RC Student	33	100	0	0
RC Not Student	0	0	15	48.4
AC Advisor (RTD)	0	0	5	16.1
Other	0	0	10	32.3
No Response	0	0	1	3.2
Total	33	100.0	31	100.0
<u>Rank</u>	Students		Leaders	
	N	%	N	%
BG	0	0	1	3.2
COL	0	0	3	9.7
LTC	0	0	8	25.8
MAJ	0	0	9	29.0
CPT	11	66.7	7	22.6
LT	22	33.3	3	9.7
Total	33	100.0	31	100.0
<u>Familiarity Asynchronous</u>	Students		Leaders	
	N	%	N	%
Not Familiar	2	6.1	4	12.9
Somewhat Familiar	4	12.1	15	48.4
Very Familiar	27	81.8	12	38.7
Total	33	100.0	31	100.0
<u>Familiarity Synchronous</u>	Students		Leaders	
	N	%	N	%
Not Familiar	6	18.2	5	16.1
Somewhat Familiar	20	60.6	20	64.5
Very Familiar	7	21.2	6	19.4
Total	33	100.0	31	100.0

Survey Response Format

The written feedback provided by each respondent was analyzed and tabulated. The open-response format of each question allowed the respondent to identify more than one factor impacting the AC3 DL course. The tabled data present the percentage of respondents providing a specific comment to each question. As an example, in response to Question 1 (see Table 2) 16 of 33 students cited employment as a factor limiting participation in the AC3 DL program,

resulting in the 48% statistic for students on this factor. In comparison, in response to Question 1 only 11 of 31 unit leaders, or 39%, mentioned employment as a factor limiting participation. Statements in response to survey questions are presented in order from highest to lowest percentage of students providing each response. The percentage of leaders providing a similar response is provided for comparison. Responses to the Survey of Policies and Practices Supporting the Armor Captain's Career Course - Distance Learning (AC3 DL) are presented in Tables 2 - 15.

Factors Limiting Asynchronous Training Participation

The statements in Table 2 indicate that the competing demands of civilian employment were viewed by both students and leaders as a limiting factor on participation in the AC3 DL asynchronous training. While students more frequently cited specific technical difficulties such as Internet lesson download time and modem requirements, unit leader responses cited computer equipment availability, and course time requirements as factors limiting student participation.

Table 2

Question 1. What factors might limit participation in the ASYNCHRONOUS self-study portion of the AC3 DL course (equipment, employment, Army policies)?

<u>Students</u>	<u>Leaders</u>	
48%	39%	Employment.
45%	23%	Equipment technical problems.
18%	29%	Family.
15%	23%	Course format.
12%	48%	Course time requirements.
12%	3%	Competing unit drill requirements.
3%	55%	Equipment availability problems.
3%	3%	Other school enrollment.
3%	6%	Personal motivation, working alone.

Factors Limiting Synchronous Training Participation

Statements in Table 3 indicate that both student and unit leader respondents view competing civilian employment, and unit drill requirements, as limiting participation in the synchronous portion of AC3 DL training. This synchronous training employed a Virtual Tactical Operations Center (VTOC) and required one weekend per month for ten months to complete. Both students and leaders cited synchronous training competition with other unit drill requirements as a challenge, as participation in unit drills was viewed as an essential part of the officer's/AC3 DL students' professional development.

Table 3

Question 2. What factors might limit participation in the SYNCHRONOUS self-study portion of the AC3 DL course (equipment, employment, Army policies)?

<u>Students</u>	<u>Leaders</u>	
45%	45%	Employment.
33%	39%	Competing unit drill requirements.
18%	6%	Equipment technical problems.
15%	19%	Course time requirements.
12%	3%	Lack of compensation.
9%	13%	Family.
9%	25%	Equipment availability problems.
6%	0%	Army policies.
6%	10%	None.
3%	6%	Personal motivation, working alone.

Reserve Component Policies for Asynchronous Training

Statements in Table 4 present respondent suggestions regarding RC policies that could support participation in AC3 DL asynchronous self-study. Students suggest that support could be provided in the form of computer equipment capable of handling the AC3 DL software and Internet download requirements. Students also suggest that providing more structure to course completion with progress updates could support participation. Some students also suggest that AC3 DL training be conducted in lieu of regular unit drill requirements. Unit leaders suggest providing computer equipment and Internet service to those officers selected for the AC3 DL course, and recommend compensating students for time spent on the course.

Table 4

Question 3. What Reserve Component policies would support participation in AC3 DL self-study ASYNCHRONOUS training?

<u>NO POLICY CHANGES IDENTIFIED:</u>	<u>Students</u>	<u>Leaders</u>
Don't know.	27%	16%
No response.	15%	13%
None, no policy changes needed.	9%	19%

<u>EQUIPMENT SUPPORT:</u>	<u>Students</u>	<u>Leaders</u>
Provide computers and net service.	9%	26%
State provides location and equipment to train as a group.	6%	0%

table continued

Table 4 (Continued)

<u>COURSE FORMAT:</u>	<u>Students</u>	<u>Leaders</u>
Structure/scheduling: Establish fixed time limit [1 year], progress updates.	9%	6%
Content: Develop an RC Pre Mobilization Program of Instruction (POI) and execute it to standard, rather than training the entire Active Component (AC) POI.	3%	0%
Collective training: Train as a group.	3%	3%
Enrollment: Automatically enroll officers from same unit into the same small group.	3%	0%
Staffing: Additional manpower for Fort Knox course support.	0%	6%
Content: Refine training materials.	0%	3%
<u>COMPETING UNIT DRILL REQUIREMENTS:</u>	<u>Students</u>	<u>Leaders</u>
Self-study in lieu of drill.	9%	6%
Count AC3 as Multiple Unit Training Assembly (MUTA), with two Additional Training (AT) periods for AC3 DL course away from unit.	3%	3%
<u>PERSONNEL POLICIES:</u>	<u>Students</u>	<u>Leaders</u>
Restrict out key leaders (Co CDR) and those in civilian education.	6%	0%
Set up “School” positions in Modified Tables of Organization and Equipment(MTOE), put students in staff slots.	3%	0%
Promotion policies.	0%	3%
Retirement points.	0%	3%
<u>COMPENSATION:</u>	<u>Students</u>	<u>Leaders</u>
Compensate for hours.	6%	13%
Paid Readiness Maintenance Assembly (RMA)/ Additional Training Assembly (ATA) status.	3%	0%
Compensate like Active Component units Tables of Distribution and Allowances (TDA) status.	3%	0%
Compensate for course completion.	0%	3%

Reserve Component Policies for Synchronous Training

Statements in Table 5 present respondent suggestions regarding RC policies that could support participation in AC3 DL synchronous collective training. Compared to asynchronous self-paced training, more leaders suggest that students complete VTOC synchronous training weekends in lieu of drill. Likewise, compared to self-paced asynchronous training, a greater

number of students and leaders suggest that students be compensated for VTOC synchronous training weekends.

Table 5

Question 4. What Reserve Component policies would support participation in AC3 DL self-study SYNCHRONOUS training?

<u>NO POLICY CHANGES IDENTIFIED:</u>	<u>Students</u>	<u>Leaders</u>
Don't know.	18%	16%
No response.	12%	9%
None, no policy changes needed.	3%	13%
<u>EQUIPMENT SUPPORT:</u>	<u>Students</u>	<u>Leaders</u>
State provides location and equipment to train as a group.	3%	0%
Provide computers and net service.	0%	13%
<u>COURSE FORMAT:</u>	<u>Students</u>	<u>Leaders</u>
Structure/scheduling: Establish fixed time limit [1 year], progress updates.	9%	6%
Content: Develop an RC Pre Mobilization POI and execute it to standard, rather than training the entire AC POI.	3%	0%
Collective training: Train as a group.	3%	0%
Enrollment: Automatically enroll officers from same unit into the same small group.	3%	0%
<u>COMPETING UNIT DRILL REQUIREMENTS:</u>	<u>Students</u>	<u>Leaders</u>
VTOC Collective study in lieu of drill.	6%	26%
Count AC3 as MUTA, with two AT periods for AC3 DL course away from unit.	3%	0%
<u>PERSONNEL POLICIES:</u>	<u>Students</u>	<u>Leaders</u>
Restrict out key leaders (Co CDR) and in civilian education.	3%	0%
Set up "School" positions in MTOE, put students in staff slots	3%	0%
Promotion policies.	0%	3%
<u>COMPENSATION:</u>	<u>Students</u>	<u>Leaders</u>
Compensate for hours.	12%	19%
Paid RMA/ATA status.	3%	3%
Compensate like AC units TDA status.	3%	0%
Compensate as IDT for unit drill, travel orders.	0%	6%
Compensate for course completion.	0%	0%

Leader Confidence in Web-Based Training

Statements in Table 6 indicate that more than half of the student and leader respondents reported that the course is effective, or has the potential to be an effective training mechanism. However, a number of leaders responded that the course is either not effective for teaching AC3 content, or not as effective as the AC resident course. Student respondents are generally more positive about course effectiveness than are unit leaders.

Table 6

Question 5. Do leaders believe web-based training is effective for AC3 DL content?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
45%	29%	Yes.
12%	3%	Yes, better than book correspondence course.
12%	0%	Don't know.
9%	9%	Maybe.
6%	16%	No.
3%	13%	No, not as effective as AC resident course.
3%	0%	Same as book correspondence course.
0%	0%	No response.
0%	19%	Has the potential to be.
0%	13%	Time requirement/management is a problem.

Non-Monetary Compensation for Synchronous Training

Statements in Table 7 indicate that some student and unit leader respondents believe that allowing participation in AC3 DL in lieu of unit drill requirements could increase participation in AC3 DL weekend synchronous training. However, students also mentioned that participation in unit drills is an essential part of an officer's professional development. Suggested forms of non-monetary compensation included college credit for work completed, and command emphasis on tracking student progress through performance reports.

Table 7

Question 6. What types of non-monetary compensation would increase participation in AC3 DL weekend SYNCHRONOUS training?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
15%	19%	In lieu of Drill.
15%	3%	None.
12%	10%	Provide computers and Internet service.
12%	6%	Retirement points.
9%	0%	College credits.
6%	3%	Don't know.
6%	19%	No response.
6%	6%	Not necessary.
3%	13%	Informal recognition, performance reports.
3%	10%	Train collectively as a group and pay (IDT/Active Duty for Special Work [ADSW]/RMA funds).

Monetary Compensation for Synchronous Training

Statements in Table 8 indicate that both student and unit leader respondents believe that providing some form of monetary compensation for synchronous training weekends could increase participation. The suggested monetary compensation is generally consistent with the compensation schedule already provided for weekend drills and TDY.

Table 8

Question 7. What types of monetary compensation would increase participation in AC3 DL weekend SYNCHRONOUS training?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
48%	61%	RMA/ATA/ADSW status.
12%	10%	No, not necessary.
9%	3%	MUTA.
3%	3%	Yes, any type of compensation.
3%	0%	Yes, placed on orders.
0%	3%	Don't know.
0%	10%	Travel pay, paid meals, paid billeting.
0%	3%	Pay for second phone line.
0%	3%	Pay for completion of course phases.

Computer Support to Distance Learning

Statements in Table 9 suggest that computers are present in units for about half of the student respondents. However about half the time these machines are not available to support student distance learning, being dedicated to full-time personnel tasks, logistics tasks, and other requirements. Both students and unit leaders mention that the distance from the student's residence to the unit, and the need to work in the evening, reduces the utility of unit computers as a support to distance learning.

Table 9

Question 8. Do units have Internet-linked computers available to support Distance Learning?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
36%	23%	Yes, but not available for students.
30%	55%	Yes, available.
15%	16%	Yes, available, but constraints (distance to unit).
9%	0%	Yes, available, but could not connect.
6%	0%	Don't know.
3%	3%	Not all (Some do, some don't).
3%	6%	Very few.
0%	3%	Technical glitches limit use, limited support.

Distance Learning Impact on Unit Responsibilities

Statements in Table 10 clearly indicate that both student and unit leader respondents view synchronous weekend training as competing with the student's other unit responsibilities. Some suggest that the synchronous training be done in lieu of unit training requirements, but students also state that training with the unit is necessary for leader development. Both students and leaders have suggested monetary compensation for weekend synchronous training, however, they also state that monetary compensation is not a solution to limitations in available weekend time.

Table 10

Question 9. Does AC3 DL weekend SYNCHRONOUS training time detract from the student's other unit responsibilities?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
58%	74%	Yes.
15%	19%	Maybe/sometimes.
9%	0%	No, I do both as separate responsibilities.
6%	3%	No.
6%	0%	Don't know.
3%	0%	NA.
0%	3%	Should not/self-discipline.

Distance Learning Enrollment Process

Statements in Table 11 indicate that both student and unit leader respondents perceive that most AC3 DL students have the computer skills necessary to work through the training.

Table 11

Question 10. Do students have the computer skills necessary to work through AC3 DL training?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
73%	48%	Yes.
21%	45%	Most do.
0%	3%	No.
0%	3%	Don't know.

Student Computer Skills

Statements in Table 12 identify difficulties experienced with course enrollment. Unit leader responses identify a number of issues, such as providing course introduction packets, that can suggest specific enhancements to the enrollment process.

Table 12

Question 11. What are some difficulties or issues with the enrollment process that you have experienced?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
36%	32%	None.
12%	6%	Difficulty with Army Training Requirements and Resource System (ATRRS).
9%	3%	Had to coordinate directly with Fort Knox.
3%	3%	Lack of info about the enrollment process.
0%	6%	Don't know.
0%	3%	Takes too long after enrollment to start course.
0%	3%	Problem getting Personal Identification Numbers to students.
0%	6%	Need to identify computer technical requirements.
0%	3%	A nightmare to try to enroll.
0%	6%	Need to counsel young officers on the need for this education for their career.
0%	3%	Need a better introduction packet describing the course prior to enrollment.

Factors Contributing to Student Attrition

Statements in Table 13 point to the time demands associated with the AC3 DL course as being a primary factor contributing to students leaving the course, conflicting with other unit, employment, and family responsibilities. Some students suggested that the requirements for high performance computer resources and on-line time demands could be greatly reduced by transferring course content to Compact Disk Read Only Memory (CD ROM) format rather than requiring that the material be downloaded (and in some cases printed out as a student reference source).

Table 13

Question 12. What are factors that have contributed to students leaving the course?

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
36%	29%	Time demands.
18%	10%	Course design is too time consuming.
15%	16%	Conflicts with unit responsibilities .
15%	29%	Employment conflicts.
12%	0%	Lack of computer resources.
12%	35%	Family.
3%	16%	Lack of motivation/laziness.
3%	0%	Lack of access to instructors.
0%	10%	Student/unit elects to go with Infantry Officer Advanced Course, (IOAC) as it is a shorter course.
0%	3%	Excessive on-line demands.
0%	3%	Need for progress reports.

Overall Perceptions of the Course

Statements in Table 14 indicate that student and unit leader respondents perceive that AC3 DL is a good course, though a number of unit leaders reported that it can't replace the resident course. Some students stated that there is a need for reference sources for the course material, and that this might be resolved by providing students with a CD ROM containing course content material. The CD ROM could serve as an alternative to much of the Internet download time requirement for the course, and eliminate or reduce students desire to print hard copies of Internet-delivered lesson material as a reference source.

Table 14

Question 13. What are your overall perceptions about the course? (Does it provide quality training? Is it seen as equivalent to the resident course, etc.?)

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
45%	32%	Good course.
15%	0%	Need reference sources for review (books, Field Manuals [FMs]).
12%	35%	Good course, can't replace resident.
12%	10%	Good course, but it takes too much time.
9%	13%	Not sure.
9%	0%	Not quality training (e.g., Students scan material for answers to pretest questions).
6%	16%	Good course, beats the correspondence books.
6%	0%	Need better feedback, computer explanations inadequate.
3%	10%	Need more real-time interactions with others.
3%	0%	Technical glitches limit course.
3%	0%	Should not teach full AC content to part-time reserves.
3%	0%	Content too detailed/not relevant.
3%	0%	Learning Mapedit/VTOC navigation wasted a lot of training time.
0%	6%	Need better equipment support for students.

Additional Factors Impacting on the Course

Statements in Table 15 reiterate a number of issues raised throughout the survey. Responses document concerns that the course takes too much time to complete and that this leads to conflicts with other unit duties, employment, and family responsibilities. Specific issues raised include a requirement for additional instructor support, and a reduction in on-line time requirements. This later concern might be partially addressed by making some course materials available on CD ROM.

Table 15

Question 14. List other factors which you think impact either positively or negatively on the course.

<u>Students</u>	<u>Leaders</u>	<u>Comments</u>
27%	23%	Course takes too much time.
15%	10%	Conflict with unit duties.
12%	13%	Computer resources a problem.

table continued

Table 15 (Continued)

12%	10%	Conflict with job.
12%	0%	Technical glitches limit course value.
9%	6%	Need reference sources for review (books, FMs).
9%	3%	Conflict with family time.
6%	19%	Good course.
6%	13%	Need more real-time interactions with others.
6%	3%	Lack of compensation.
6%	0%	Not as good as resident.
6%	0%	Download/on-line time a problem.
6%	0%	Reformat/chunk lesson material for smaller units.
3%	0%	Content too detailed/not relevant.
3%	0%	Mapedit/VTOC interface wasted a lot of training time.
3%	0%	The course is not quality training.
0%	10%	Need more command emphasis.

Summary

The present research effort was successful in gathering feedback on the AC3 DL program from both students actively involved in the course, and also the leaders of the units involved. The survey provided feedback regarding factors limiting student participation in the course to include RC policies, monetary and non-monetary incentives, course impact on the student's other unit responsibilities, and factors contributing to student attrition. Respondents provided recommendations placed in the context of current RC policies as well as realistic constraints. Responses identified policy changes that might support the students' successful course completion. Both students and unit leaders were generally positive about the course, and described it as an improvement over the previous paper-based correspondence course. Shortcomings with regard to computer equipment and Internet access support were identified. Concerns about the length of specific portions of the AC3 DL course were identified which can be used in restructuring specific sections of the training. Both students and unit leaders contributed useful feedback and identified change recommendations based on their differing perspectives. As an example, students identified conflicts between unit drill and AC3 DL course time requirements, while unit leaders identified ways in which command emphasis on AC3 DL training could enhance successful completion of the course.

The low response rate and self-selection aspect of the sampling limit our ability to say that the opinions expressed in the survey are representative of the total population. While it is risky to generalize the opinions expressed, the number of respondents might be adequate for purposes of identifying usability problems associated with the courseware, and for generating "good ideas" and policy change recommendations.

Discussion

Based on the results of the survey several actions were identified that might enhance AC3 DL program effectiveness. With regard to student personnel issues, an effort could be made to select officers for AC3 DL when they first make lieutenant, or early in their career. Where possible, students could be assigned to secondary staff positions, or be held in a school status. Actions should be taken to finalize the retirement points issue. The USAARMS could identify the course hours for each phase of AC3 DL training, and RC leaders could then establish a standard for the awarding of retirement points for successful completion of each phase of training. The Guard Bureau should also lobby for additional funds, and develop a policy for states to compensate students for time spent in Synchronous VTOC training.

With regard to course content, actions are underway to restructure some course material to separate long lessons into several shorter lessons. The USAARMS could also work to identify where AC3 DL Asynchronous self-study material could be provided on CD ROM media as one alternative to on-line coursework, and downloads. This could greatly reduce the on-line time requirement, make training more portable, and provide students with subject matter documentation, reducing or eliminating the need to print paper copies of lesson materials.

Addressing course administrative support requirements, leaders should explore opportunities to integrate AC and Active Guard Reserve (AGR) instructors to counter a shortage in authorized instructor personnel. The DL format does not lead to a reduction in the requirement for instructors, as instructors are essential to on-line training success for DL students. Staffing levels and policies are needed that will provide support for students at regularly scheduled "office hours", and also provide "on-call" instructor availability on weekends to respond to student needs. Finally, survey results suggest that there is a need for the Guard Bureau to get information down to the user level, describing how the web-based ATRRS can be used to enroll students in DL courses.

Appendix A

List of Acronyms

AC	Active Component
AC3	Armor Captains' Career Course
AC3 DL	Armor Captains' Career Course Distance Learning
ADSW	Active Duty for Special Work
ADT	Active Duty Training
AFRU	Armored Forces Research Unit
AGR	Active Guard Reserve
AOAC	Armor Officers' Advanced Course
ARI	U.S. Army Research Institute for the Behavioral and Social Sciences
AT	Additional Training
ATA	Additional Training Assembly
ATRRS	Army Training Requirements and Resource System
CD ROM	Compact Disk Read Only Memory
Co CDRs	company commanders
DL	Distance Learning
FBC	Future Battlefield Conditions
FM	Field Manual
FUTURETRAIN	Techniques and Tools for C4ISR Training of Future Brigade Combat Team Commanders and Staffs
IDT	Inactive Duty Training
IOAC	Infantry Officer Advanced Course
MTOE	Modified Tables of Organization and Equipment
MUTA	Multiple Unit Training Assembly
POI	Program Of Instruction
RC	Reserve Component
RTD	Readiness Training Detachment
RMA	Readiness Maintenance Assembly
TDA	Tables of Distribution and Allowances
USAARMS	U.S. Army Armor School
VTOC	Virtual Tactical Operations Center

Appendix B

Survey of Policies and Practices Supporting the Armor Captain's Career Course - Distance Learning (AC3 DL)

Goals of the survey:

The U.S. Army Armor School (USAARMS) is asking you to provide your good ideas about the issues surrounding Distance Learning (DL). We will use this information to develop the final version of a survey that will be sent out to a large number of soldiers involved in Army DL. This first questionnaire is a preliminary one to identify the key issues that the Army should consider in examining DL training management. Issues include perceived benefits of DL to the trainee knowledge base, benefits to the trainee's unit, location where training takes place, and whether forms of compensation might enhance DL course participation.

Armor School Distance Learning: Armor Captain's Career Course

The USAARMS has produced cutting edge DL courseware developed for and delivered over the Internet. This new courseware allows soldiers to gain knowledge through self-paced tutorials, and also provides a virtual reality environment where geographically dispersed students and instructors can come together for collective training in real time. The Armor Captain's Career Course [Distance Learning] (AC3 DL) is one example of the new generation of DL courses. The AC3 DL trains and professionally develops captains to command companies and to perform as assistant operations officers at battalion and brigade level. Until recently, training was composed of a text-based correspondence course followed by resident training. The new AC3 DL course uses a combination of computer-based training and web-based instruction in a collaborative, virtual environment preceding the resident training. Training is provided in three phases. Phase 1 "**Asynchronous**" training involves 240 hours of Internet-delivered self-paced learning, typically completed at home. Phase 2 "**Synchronous**" training consists of 120 instructional hours during which students and instructors working from remote locations interact synchronously with one another in a Virtual Tactical Operations Center to generate work products and solve problems. Phase 2 training is conducted on 10 Drill Weekends, or on the soldiers own weekend time. Phase 3 "Resident" training involves two weeks Active Duty Training at Fort Knox.

Please make an "X" next to the appropriate response, or enter your response.

1. Duty Position

- a. Reserve Component: Armor Captains Career Course - Distance Learning student
- b. Reserve Component: Not enrolled in Distance Learning program
- c. Active Component Advisor (RTD)
- d. Other (specify) ____

2. Rank

- a. COL
- b. LTC
- c. MAJ
- d. CPT
- e. 1LT
- f. Other (specify) ____

3. Unit (specify) ____

4. How familiar are you with the ASYNCHRONOUS (individual self-paced study) phase of the AC3 DL course?

- a. Very unfamiliar: Don't know any students, don't know the course
- b. Somewhat unfamiliar: Know a little about the content and format
- c. Somewhat familiar: Know how students work through course
- d. Very familiar: Know students, policies that support the program

5. How familiar are you with the SYNCHRONOUS (collective training in the Virtual Tactical Operations Center) phase of the AC3 DL course?

- a. Very unfamiliar: Don't know any students, don't know the course
- b. Somewhat unfamiliar: Know a little about the content and format
- c. Somewhat familiar: Know how students work through course
- d. Very familiar: Know students, policies that support the program

ARMOR SCHOOL DISTANCE LEARNING SURVEY

1. What factors might limit participation in the ASYNCHRONOUS self-study portion of the AC3 DL course? (equipment, employment, Army policies)
2. What factors might limit participation in the SYNCHRONOUS collective training on weekends portion of the AC3 DL course? (equipment, employment, Army policies)
3. What Reserve Component policies would support participation in AC3 DL self-study ASYNCHRONOUS training?
4. What RC policies would support participation in AC3 DL collective weekend SYNCHRONOUS training?
5. Do leaders believe web-based training is effective for AC3 DL content?
6. What types of non-monetary compensation would increase participation in AC3 DL weekend SYNCHRONOUS training?
7. What types of monetary compensation increase participation in AC3 DL weekend SYNCHRONOUS training?
8. Do units have Internet-linked computers available to support Distance Learning?
9. Does AC3 DL weekend SYNCHRONOUS training time detract from the student's other unit responsibilities?
10. Do students have the computer skills necessary to work through AC3 DL training?
11. What are some difficulties or issues with the enrollment process that you have experienced?
12. What are factors that have contributed to students leaving the course?
13. What are your overall perceptions about the course? (Does it provide quality training? Is it seen as equivalent to the resident course, etc.?)
14. List other factors which you think impact either positively or negatively on the course.